ABSTRACT

An audio encoder, generating a stereo signal based on a multi-channel signal, includes a downmix unit (100) for downmixing a multi-channel signal exceeding two channels to a two-channel stereo signal, a first coding unit (101) for generating a first coded signal by coding the downmixed stereo signal, a second coding unit (102) for generating a second coded signal by coding information to restore the downmixed stereo signal to a multi-channel signal, a code size calculating unit (103) for calculating a code size of the second coded signal, and a first multiplexing unit (104) for multiplexing the calculated code size in either the first coded signal or the second coded signal. Accordingly a decoder is able to easily extract a coded signal of the multi-channel signal based on the code size, and the decoder reproducing only the downmixed signal can be configured inexpensively.